

## ABSTRACT

A method for producing a compound semiconductor single crystal by a liquid encapsulated Czochralski method, including containing a semiconductor raw material and an encapsulating material in a raw material melt-containing portion having a first crucible having a bottom and a cylindrical shape and a second crucible disposed within the first crucible and having a communication hole communicating with the first crucible in a bottom portion thereof; melting the raw material by heating the raw material melt-containing portion; and growing a crystal by making a seed crystal contact with a surface of the raw material melt in a state covered with the encapsulating material and by pulling up the seed crystal. A heater temperature is controlled so that a diameter of a growing crystal becomes approximately equal to an inner diameter of the second crucible, and the crystal is grown by maintaining a surface of the growing crystal in a state covered with the encapsulating material until termination of crystal growth.